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09/250,287 02/16/99 SOLONDZ

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EXAMINER

MTI ORD. M

ART UNIT

PAPER NUMBER 3

2683

DATE MAILED:

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/250,287

Applicant(s)
Solondz et al.

Examiner
Marceau Milord

Group Art Unit
2683



☒ Responsive to communication(s) filed on Feb 16, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-25 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-25 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sporre (US Patent No 5966657) in view of Leblanc et al (US Patent No 5960341).

Regarding claim 1, Sporre discloses a method of making operational measurements in a wireless communication system (figs. 1-3), comprising a sending a measurement request from one of a main controller and a first base station (B1 of fig. 1) to at least a second base station (B9 of fig. 1), said measurement request (It is considered that the base station B9 orders mobile station M3 of fig. 1 to make periodic signal quality measurements on the downlink BCCH channels ; col. 7, lines 5- 67) requesting said second base station to instruct mobile terminals (M1- M10 of fig. 1) in communication with said second base station to make operation measurements of at least one signal transmitted by said first base station (B1 of fig. 1) ; transmitting (the mobile station M3 or M6 measures systematically the signal quality on each of the frequency channels it has been ordered by the base station B1 to measure via the system 5 information sent on the SACCH ; col. 11, lines 1 - 61) a measurement instruction (col. 5, line 1-

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col. 6, line 14) from said second base station (B9 of fig. 1) to said mobile terminals (M1- M10 of fig. 1) in communication with said second base station in response to said measurement request, said measurement instruction instructing said mobile terminals in communication with said second base station to make operational measurements of said signal transmitted from said first base station ; and receiving (B1-B10 of fig. 1 ; these measurements are regularly made and reported back to the base station and network which uses it to construct a list of neighboring cells which are candidates for possible hand-off, col. 8, lines 1- 31) results of said operational measurements at said second base station (B9, B5, B3, B 5, B8, col. 8, lines 32- 65) from said mobile terminals (M1- M10 of fig. 1) in communication with said second base station (col. 10, line 3- col. 11, line 63). However, Sporre does not specifically disclose a second base station transmitting a measurement instruction to the mobile terminals in response to the measurement request. On the other hand Leblanc et al, from the same field of endeavor, discloses in figure 5 a wireless communication system including a plurality of base station each having a corresponding coverage area. A control unit is also provided in electrical communication with the base station and is operative to receive calls forwarded by the base stations, and generate a call information request signal. These base stations can make the operational measurements themselves as indicated in the measurement request (fig. 5 and fig. 11, col. 9, line 10- col. 10, line 31; col. 12, line 3- 64; col. 23, line 24- col. 24, line 66) . Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply this RF frequency measurements databank of Leblanc to the radio frequency measurement of Sporre in order to

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improve the communication system and make downlink operational measurements in a simple and inexpensive manner.

Regarding claims 2, 13, 17, 23, Sporre as modified discloses a method (fig. 1) of sending (M1- M10 of fig. 1) said received results (col. 10, lines 9- 51) to said main controller (the mobile station M3 or M6 measures systematically the signal quality on each of the frequency channels it has been ordered by the base station B1 to measure via the system 5 information sent on the SACCH ; col. 11, lines 1 - 61).

Regarding claim 3, Sporre as modified discloses a method (fig. 1) of processing said received results (col. 10, lines 9- 67) ; and sending (M1- M10 of fig. 1; 42 of fig. 6) said processed received results to said main controller (col. 7, line 5- col. 8, line 65).

Regarding claim 4, Sporre as modified discloses a method for averaging said received results (col. 11, lines 5- 63).

Regarding claim 5, Sporre as modified discloses a method wherein said step of receiving results (figs. 5- 7) of said operational measurements and location information indicating a location of said mobile terminal taking each operational measurement (col. 10, line 3- col.11, line 58) ; and said step of creating a map of said received results based on said location information (col. 12, lines 20- col. 13, line 59).

Regarding claim 6, Sporre as modified discloses a method wherein said step of receiving results (figs. 5- 7) of said operational measurements and location information (col. 12, lines 20-

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col. 13, line 59) indicating a location of said mobile terminal taking each operational measurement (col. 10, line 3- col.11, line 58).

Regarding claims 7, 11, 18, 22 , Sporre as modified discloses a method wherein said signal transmitted from said first base station (B1-B10 of fig. 1; col. 8, lines 32- 65) is transmitted at a constant power level (col. 11, lines 5- 63).

Regarding claims 8 and 19 , Sporre as modified discloses a method wherein said signal transmitted from said first base station is a forward control channel signal (col. 5, line 2- col. 6, line 20; col. 7, line 34- col. 8, line 55).

Regarding claims 9 and 20, Sporre as modified discloses a method wherein said wireless communication system is a code division multiple access system and said signal transmitted from said first base station is a pilot signal (col. 5, line 4 - col. 6, line 20; col. 7, line 5- col. 8, line 65).

Regarding claims 10 and 21, Sporre as modified discloses a method wherein said signal is one of a reserved or dummy channel (col. 8, line 32- col. 10, line 51).

Regarding claims 12, Sporre as modified discloses a method for making said operation measurements at said mobile terminals in communication with said second base station during off time-slots of said mobile terminals (col. 7, lines 5- 67; col. 8, lines 8- 65) in communication with said second base station in response to said measurement instruction (col. 10, line 3- col. 11, line 63).

Regarding claims 13 and 23, Sporre as modified discloses a method wherein said step of sending said measurement request from said main controller (col. 11, lines 1 - 61).

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Regarding claims 14 and 24, Sporre as modified discloses a method wherein said step of sending said measurement request (col. 11, lines 1 - 61) from said first base station to said second base station via said main controller (col. 7, line 5- col. 8, line 65), said measurement request instructing said main controller to send said measurement request to said second base station (col. 11, lines 1 - 61).

Regarding claims 15 and 25, Sporre as modified discloses a method (figs. 5-7) wherein said operational measurements includes at least one of signal strength (col. 11, lines 11- 58), signal-to-noise ratio, frame error rate and bit error rate of said signal transmitted from said first base station as received at said mobile terminals (col. 13, line 1- col. 14, line 36) in communication with said base station (col. 16, line 27- col. 17, line 21).

Regarding claim 16, Sporre discloses a method of making operational measurements in a wireless communication system (figs. 1-3), comprising : sending a measurement request from one of a main controller and a first base station (B1 of fig. 1) to at least a second base station (B9 of fig. 1), said measurement request requesting (It is considered that the base station B9 orders mobile station M3 of fig. 1 to make periodic signal quality measurements on the downlink BCCH channels; col. 7, lines 5- 67) said second base station to make operation measurements of at least one signal transmitted by said first base station (the mobile station M3 or M6 measures systematically the signal quality on each of the frequency channels it has been ordered by the base station B1 to measure via the system 5 information sent on the SACCH ; col. 11, lines 1 - 61) ; and making (M1- M10 of fig. 1; these measurements are regularly made and

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reported back to the base station and network which uses it to construct a list of neighboring cells which are candidates for possible hand-off, col. 8, lines 1- 31) said operational measurements at said second base station (col. 10, line 3- col. 11, line 63). However, Sporre does not specifically disclose a second base station transmitting a measurement instruction to the mobile terminals in response to the measurement request. On the other hand Leblanc et al, from the same field of endeavor, discloses in figure 5 a wireless communication system including a plurality of base station each having a corresponding coverage area. A control unit is also provided in electrical communication with the base station and is operative to receive calls forwarded by the base stations, and generate a call information request signal. These base stations can make the operational measurements themselves as indicated in the measurement request (fig. 5 and fig. 11, col. 9, line 10- col. 10, line 31; col. 12, line 3- 64; col. 23, line 24- col. 24, line 66) .

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply this RF frequency measurements databank of Leblanc to the radio frequency measurement of Sporre in order to improve the communication system and make downlink operational measurements in a simple and inexpensive manner.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Raith US Patent No 6044270 discloses a method for measuring signal strengths by mobile stations in a wireless communication system.

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Frodigh et al. US Patent No 6104933 discloses a method and apparatus for controlling an amount of downlink power to be applied in each downlink transmission in a micro diversity radio system.

Genell et al. US Patent No 6122505 discloses a communication system using its existing resources to test base stations, without requiring dedicated test equipment.

Norstedt et al. US Patent No 5926469 discloses a channel resource management within a digital mobile communications network.

Leblanc et al. US Patent No 5602903 discloses an improved positioning system and method for use in a wireless communication system including a plurality of base stations each having a corresponding coverage area.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marceau Milord whose telephone number is (703) 306-3023. The examiner can normally be reached on Monday through Friday from 7:30 A.M. to 6:00 P.M.

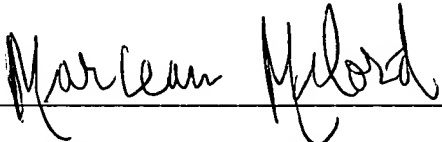
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost, can be reached on (703) 308-5318. The FAX phone number for this Group is (703) 308-6306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.


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MARCEAU MILORD

February 23, 2001


EDWARD F. URBAN
PRIMARY EXAMINER